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ABSTRACT

This paper explores what is known and what is needed in the areas of (1) experiential learning and experiential education and (2) extending experience-based career education (EBCE) to groups not currently served by such a program. Following the introduction, the paper contains eight sections. Section 2 provides a discussion of what the experts are saying about youth and adults and about school and work. The third section reviews proposed solutions to the problems of young people and adults in school and at work and concludes that experiential learning is the common theme underlying the solutions. Problems identified by experiential learning advocates that have significance for experience-based education in general and for EBCE are presented in the fourth section. Sections 5 and 6 give working definitions of experiential learning and experiential education, identify possible areas for research, and present a model for blending research and development through the extension of EBCE. The seventh and eighth sections discuss extending EBCE to three populations (junior high gifted students, adults, and teachers in training) and present a process model for extending research and development on EBCE. Following the conclusion, sample research questions and an example of how the process model might work are appended. (LRA)

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EXTENDING EXPERIENCE-BASED EDUCATION: SOME ISSUES AND CONSIDERATIONS

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TABLE OF CONTENTS

		page
I.	Introduction	1
II.	A Recapitulation of the Problem--What the Experts Are Saying About Youth and Adults and About School and Work	2
III.	The Nature of the Proposed Solutions	7
IV.	Problems With the Solutions	11
V.	A Working Definition of Experiential Learning and Experiential Education	15
VI.	A Framework for Linking Research and Development	20
VII.	Extending EBCE to Three Populations	23
	Gifted and Talented Junior High School Students	
	Adult Learners	
	Teachers--Undergraduates and On-the-Job	
VIII.	A Process Model for Extending Research and Development on Experience-Based Career Education	37
IX.	Conclusion	45
Appendix A:	Sample Research Questions for Four Research Areas	46
Appendix B:	Applying the Process Model--How It Might Work with Gifted and Talented Junior High Youth	50
Bibliography		63

EXTENDING EXPERIENCE-BASED EDUCATION: SOME ISSUES AND CONSIDERATIONS

SECTION I: Introduction

The Education and Work Program of the Northwest Regional Educational Laboratory (NWREL) agreed to prepare a policy outreach paper for the National Institute of Education (NIE) to present information about the possible extension of Experience-Based Career Education to three populations: gifted and talented junior high students, adults and teachers. In order to do so, it became obvious that the broader issues of experiential learning and experiential education were crucial to the extension. This paper then, explores what is known and what is needed in the areas of:

- Experiential learning and experiential education
- Extending EBCE to groups not currently served by the program

The remainder of this paper is organized in the following way:

Section II: A Recapitulation of the Problem--What the Experts are Saying About Youth and Adults and About School and Work

Section III: The Nature of the Proposed Solutions

Section IV: Problems with the Solutions

Section V: A Working Definition of Experiential Learning and Experiential Education

Section VI: A Framework for Linking Research and Development

Section VII: Extending EBCE to Three Populations

Section VIII: A Process Model for Extending Research and Development on Experience-Based Career Education

Section IX: Conclusion

Throughout this paper, we have attempted to present issues for NIE's consideration which we feel should effect policy. This paper is not intended to provide all the answers. Our intent is to explore some of the problems and opportunities in a way that will provoke additional questions as well as a search for some answers.

Finally, by presenting the research sections first, we are not implying that extending EBCE is a secondary consideration. Both tasks are, in our opinion, of critical import to future directions for NIE.

SECTION II: A Recapitulation of the Problem--What the Experts Are Saying About Youth and Adults and About School and Work

About Youth. During the last five years, experts from many fields served on panels, commissions and task forces devoted to the problems of the young in our society. Although the evidence they compiled is, by now, a familiar story, it is still distressing.

Generally, the problems center around the inadequacy of the links between school and work and the difficulties young people experience making the transition from adolescence to adulthood. For example:

- The young are isolated from the adult world.

  What we are witnessing is the "separation of the young from the rest of society"--an unhealthy situation at best (Coleman 1974:80). At a time when young people and adults should be learning from and about each other, the young are in school and the adults are at work. A related and compounding problem is the separation of the young from each other according to age.

- The young are losing confidence in school.

  More young people are in school than ever before (55 percent of 18 year olds and 98.9 percent of 12-15 year olds in 1971) (Martin 1976:47). At the same time that our laws and customs are keeping the young in school longer, experts warn us that "(there) is a general adolescent sense of disconnection between self and school.... The result is a sizeable loss of confidence in schooling among the young" (Coleman 1974:88). Not only, then, are the young isolated, but they also lack confidence in the institution to which they have been sent for their isolation.

- The student role is fragmented.

  Along with the disconnection between self and school, the young in their role as students experience a "repetitive round of movement from one expert to another" (81). "In their isolated and separate world of school, the young are dependent on specialized teachers who know little about the students as individuals" (Ibid).

- The student role is passive.

  According to a 1972 study, the student role is, for the most part, a passive one (Boocock 1972 in Coleman 1974).

The primary method of instruction in the classroom makes information assimilation the dominant learning pattern for the young (Coleman 1976). There is little that is active about taking in information.

- Adults, as well as the young, lack confidence in the schools.

  Not only are we isolating the young for more years in institutions they aren't sure of and where their role is both fragmented and passive, we as adults aren't sure the schools, particularly secondary schools, can handle the job. The legitimacy of schools is being questioned and the ability of the schools to respond to society's demands is dwindling. "Part of the problem of legitimacy and resilience (of schools) is that through long accretion of activities and responsibilities and the assuming of new burdens at a rapid pace in recent decades, the institutions of American secondary and higher education have taken on a great deal of responsibility and work" (Coleman 1974:90). Taxpayers and teachers, according to and in addition to the experts, are now questioning the school's ability to assume such a large share of responsibility for educating the young (Ibid).

- The schools don't and can't teach all the young need to know.

  " ...schools' structures are designed wholly for self-development, particularly the acquisition of cognitive skills and of knowledge.... (Schools) do not provide extensive opportunity for managing one's affairs, they seldom encourage intense concentration on a single activity, and they are inappropriate settings for nearly all objectives involving responsibilities that affect others" (Coleman 1974:146). One can reasonably say that the schools should not be expected to provide these experiences for the young; in the not too distant past, however, we did expect all this and more from schools, particularly from the comprehensive high school.

In addition to problems centering around the schools, the young are having a tough time connecting with the other institution that pervades our lives--work. Some of these compounding difficulties deserve to be mentioned.

- It's hard to find a job.

  In spite of the confusion surrounding the collection and interpretation of youth unemployment statistics, we know that "in any particular month between a million-and-a-half and two million teenagers are looking for work and unable to find it" (Wirtz 1975:22). In any given year, about half of all those out of work are teenagers. Although

the number of young people finding jobs has been increasing, a rate of 20 percent unemployment for youth who want to work is dangerously high.

- Young people who choose education leading toward a specific career aren't necessarily getting the jobs they were trained for.

  The most well-known example is the number of recently trained teachers who can't find work in their field. We may question the appropriateness of such training and/or the job market, but we cannot question the problem lack of jobs in one's field creates for young, well-trained job seekers.

- We're better educated and our jobs may not use what we've learned.

  By 1990, fifteen out of every sixteen persons will have more than an elementary school education; one of every four will have a college degree (Wirtz 1975:29). "But we are developing more highly educated people faster than we are creating jobs that traditionally required this much education" (96). If we continue to view work as the place where we use our education--and get rewarded accordingly--we may be in for some disappointments. It may take more education to get a job; it may not take as much to do it.

- Picking a career may be as hard as getting a job.

  Coleman reports that "subjects in one recent large-scale survey considered vocation-related decisions their most critical task" (Coleman 1974:103). Although changes in career plans and choices occur periodically throughout adult years, youth become concerned about the topic as early as age 12. With all the uncertainty about employment and the problems the young are encountering in school, it's no wonder they worry!

Before we turn to some of the proposed solutions to these problems (and, more specifically, to some of the problems inherent in the solutions), we would like to look briefly at what the experts are finding out about adults in relation to their major institution--work.

About Adults. While some analysts are writing about the problems of youth with school and work, others are focusing their attention on what is happening with and to adults at work as well as in retirement. The following will serve to illustrate the kinds of work-related problems adults are experiencing or can expect to experience in their lifetimes:

- Many adults can't find work.

  This problem has touched too many lives. For some, trying to find work has become a job in itself. To cite some not too recent but compelling numbers, "In 1974 some 8 million persons drew unemployment benefits--a fourth of them for fifteen weeks or longer; 1.9 million exhausted their benefits without finding employment" (Wirtz 1975:115). The unemployment figures are based on those who are actively looking for work; we don't really know how many gave up.

- Adults must be prepared to change jobs and careers.

  The Department of Labor estimated in 1975 that a twenty-year old man would change jobs six or seven times in his working life. That alone might be manageable; information from the Bureau of Census makes it more problematic by suggesting "that this same man will--on the average--make one or two shifts...in major occupational groupings, one of which will require further education or training" (Wirtz 1975:108). Exit, entry and re-entry problems for working women who are also raising a family add another dimension to the issue of jobs and career shifts.

  Some job and career changes will be initiated by the worker; some will not. "There is...the significantly increased prospect now that people will move in the course of their work careers from one type of job to another largely because some types of jobs are expanding and others diminishing" (93). In sum, we had better be prepared for change.

- Work isn't what it used to be.

  It is less physical and takes less of our lifetime. Machines do much of the physical labor workers used to do, thereby changing the nature of the work requirements. At the same time, adults go to school longer, work fewer hours in a year, retire earlier and live longer. "The net of it is that work takes less than half as much of a life's waking hours as it did a century ago and gives us more than twice the opportunity for other uses" (Wirtz 1975:97). Obviously, this does not in itself constitute a problem. Figuring out what to do with our time--both on the three-day weekends and in the 20 or 30 years after retirement--is a problem.

For adults who find work and who endure the job and career changes described above, there is a possibility that they may not end up satisfied with their work, which leads us to the next problem:

- Not all workers are happy or satisfied with what they are doing.

  When Work in America was published, the notion of worker satisfaction was dramatically and effectively shattered. James O'Toole, Chairman of the HEW Task Force responsible for the study, has since written numerous articles and books which shed more light on the topic. He tells us that what workers want, "as more than 100 studies in the past 20 years show, is to become masters of their immediate environments and to feel that their work and they themselves are important--the twin ingredients of self-esteem" (Work in America 1973:13).

  Viewing work as a source of self-esteem presents problems for many. Quoting again from Work in America, "Dull, repetitive, seemingly meaningless tasks, offering little challenge or autonomy, are causing discontent among workers at all occupational levels" (xv).

Conclusion. Just as the young have problems with school, adults have problems with work. It is obvious that two of the most powerful and pervasive institutions in our lives, as currently operating, are not sufficient to respond to these problems. What, then, do the experts propose we do?

SECTION III: The Nature of the Proposed Solutions

A careful reading of the many solutions proposed by the experts leads us to the general conclusion that we must:

- Restructure education so that it no longer is limited to one institution (school) but also includes access to and provision for other institutions, work being the most frequently mentioned.

- Restructure work so that workers can experience more and better learning both on the job and through our traditional place of learning, school.

At the same time that this exchange between dominant institutions would take place, a number of changes would go on in school and work places to insure that we do not trade one set of problems for the other. In both the exchange and the changes we find reference to what could be termed a key to a successful education-work relationship for young people and adults. The experts use various terms for it (more on this shortly), but we shall call it experiential learning. Experiential learning is what the experts believe young people will get when they spend time with adults at work; it is that which will help workers satisfy their need to learn on the job; it offers a new way of organizing short-term and long-term off-the-job educational experiences for adults as well as for young people through the restructuring of postsecondary institutions. Experiential learning is clearly the "missing piece" that will help the young connect with the adult world and help adults connect successfully with work, or simply help them get work. We are not suggesting that experiential learning is the only proposed solution; we are suggesting that it appears in the recommendations, either implicitly or explicitly, often enough to warrant our further consideration. A few illustrations will serve to highlight this.

In Youth: Transition to Adulthood the Coleman Panel developed eight proposals, seven of which advocate nonschool institutional structures in which young people would hold a role other than that of student. The Panel describes this role as follows:

> "This different role involves either responsibility for (the young person's) welfare, or responsibility for others' welfare; it involves orientation to productive and responsible tasks; where it involves learning it is learning through action and experience, not by being taught" (Coleman 1974:146). (Emphasis added.)

The Education of Adolescents, the Martin Panel report which followed the Coleman report, includes 11 major recommendations and numerous

in-text recommendations. In abbreviated form, the 11 major recommendations are:

1. Replace comprehensive high schools with comprehensive education.

2. Start participatory education programs for adolescents and adults in the arts, careers and government

3. Establish small, part-time, short-term flexible schools

4. Lower compulsory daily attendance

5. Reemphasize the basic role of the high school, i.e., the education of the intellect

6. Establish a community guidance center

7. Consider the above as working hypotheses to be tested

8. Include adolescents and adults in planning and reviewing educational change programs

9. Conduct research to provide LEAs with the technical help needed for change programs

10. Provide federal support and state review in planning and evaluating programs

11. Provide federal support for a "national recruitment training and technical support program for operational planning teams at the local level" (Martin 1976:10-19).

In Martin's preface to the report, he identifies as an essential feature of the report "the conviction that the high school has become overburdened and should share its responsibilities for youth with other agencies in the community, so that instruction and educational experiences can be provided both in the school and outside the school in the community itself" (viii). When the Panel discusses how the young should be integrated into the larger community, "a wide variety of out-of-school or 'experience-based learning opportunities' " is the recommendation (52). (Emphasis added.)

In The Boundless Resource, the Wirtz Council, committed to the idea of bringing education and work closer together through collaborative processes, recommends the creation of Education-Work Councils. Their purpose, broadly stated, would be to "ferry people and ideas across the gap between education and employment and at the same time

infuse the coming-of-age process with knowledge and experience available from the broader community" (Wirtz 1975:65). (Emphasis added.) Although the focus here is on administrative processes, the Council notes that some previous efforts to bridge the education-work gap have not demonstrated that we know how to produce the outcomes we seek. More specifically, "Experiential learning is still a phrase looking for its specific content" (2). (Emphasis added.)

In Work, Learning, and the American Future, O'Toole emphasizes that part of the search for a better quality of life involves finding ways education can be made more relevant to the work world and at the same time avoid becoming a "passive handmaiden of industry or the economy" (O'Toole 1977:xii). One alternative proposed by O'Toole would fuse liberal and technical learning thereby forming an alternative career education model, one which Europeans call the "learning society." To achieve this, O'Toole lists the following goals as proposed by the European spokespersons for the model (Gass, Becker, Husen):

- "the integration of education, work and leisure
- the integration of theory and practice, of liberal and technical education
- the integration of social classes in education and at work
- an emphasis on continuing education or lifelong learning
- an emphasis on education for leisure as well as for work
- preparation of youth for the world of work acquired through actual work experience
- a deemphasis on educational credentialism
- a focus on learning and individual growth as the goals of life
- an emphasis on school as a joyous place where one learns to learn
- the integration of age groups" (139)

In support of the goals of the learning society, O'Toole presents in some detail the ideas of Dewey and Whitehead "that education should be based on experience or self-discovery" (141). European legal training is given as an example of an existing model of a "practical-liberal, theoretical-applied, vocational-liberal" form of career education (145). Again, in this model, the method of learning is described as experiential.

Experience-Based Career Education--A Needed Response

Experience-Based Career Education (EBCE) can certainly be cited as an important response to the problems of young people described earlier and as an educational experience which emphasizes the importance of experiential learning. It has, then, addressed the needs and employed the methods generally advocated by the experts. Although it may be unnecessary to develop a "case" for EBCE as part of this document, we believe it is important to recognize both the focus and the accomplishments of this ongoing development effort.

Conclusion. A review of some of the key literature on the problems of young people and adults in school and at work and an analysis of the proposals offered leads us to conclude that there is a common theme underlying improving the education-work relationship. That theme we are calling experiential learning. We believe EBCE represents one of the most substantial and thorough efforts to date to promote experiential learning. However, although there may be agreement that experiential learning is a critical component of any education-work program--and likely to gain in prominence in the policy vocabulary--there are problems with the term.

In the next section of this document, we describe some of the problems identified by experiential learning advocates which we believe may have significance for experience-based education in general and for EBCE.

SECTION IV: Problems With the Solutions

Like "justice" and "freedom," "experiential learning" is a phrase most people do not question. As we explore the phrase further, however, we find confusing and contradictory definitions of what it means, concern over the lack of evidence that it works, and revealing statements like that of Wirtz cited earlier: "Experiential learning is still a phrase looking for its specific content" (Wirtz 1975:2).

Recent literature does, however, contain some definitions of experiential learning.* Some examples are presented here to illustrate the confusion surrounding what is connoted by and attributable to the phrase "experiential learning."

> Definition 1: learning which occurs prior to enrolling in school for which credit may or may not be given and which was conducted without prior arrangement with an instructor. Variations of this definition appear in the work of Sexton and Ungerer (1975); Arnold (no date).
>
> Definition 2: learning through acting, part of which involves experiences or observing the consequences of action (Coleman 1976:50).
>
> Definition 3: learning from experience in the work world; relating learning in school to the work world; relating experience to the need for more knowledge and theory; may provide credit (Venn 1976:78).
>
> Definition 4: "The phrase 'experiential learning' is redundant. Most of us would never say 'wet water' or 'physical sex,' but we seem very comfortable discussing experiential learning, tacitly acknowledging that there is some other kind. There isn't." (Lyons 1972:21 as cited in Sexton and Ungerer 1975:5).

The first definition describes the circumstances in which learning occurs; the second definition describes a process by which something is learned; the third is largely contextual; and the fourth (included here only to illustrate the range of opinions) says that all learning is experiential. Although these particular authors alert the reader

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We recognize that more work needs to be done on definitions. A more systematic approach to defining experiential learning and experiential education is part of the work proposed in the NWREL Education and Work 5-Year Plan.

to their meaning of experiential learning, others use the term without definition. Still others employ synonyms--action-learning, experience-based learning, work-experience learning, participatory learning, self-directed learning and the familiar learning by doing.

The vocabulary and the meanings become even harder to decipher when the phrase "experiential education" is introduced. Consider the following definition from Sexton and Ungerer:

> "By experiential education we mean learning activities outside the normal classroom environment, the objectives of which are planned and articulated prior to undertaking the experience, involving activity that is meaningful and real and on the same level as that of other nonstudents in the same nonclassroom environment, and in which the learner has the assistance of another person (most often a faculty advisor) in expanding the learning as much as possible that takes place in nonclassroom settings" (Sexton and Ungerer 1975:1).

Although it is unrealistic and even unwise to expect definitions to remain the same from author to author, it would appear that the degree of variation in the definitions presented above indicates more than semantic differences. For instance, the first definition states that experiential learning occurs prior to enrolling in school; the second has no reference to location, leading one to believe experiential learning can occur in any environment; and the third implies that experiential learning goes on in the work place while the learner is enrolled in school. These variations can become a major problem when school people, students, workers, program developers, administrators and a host of others begin to implement "experiential learning," "experiential education" or any of the synonyms.

Apart from differences in what is meant by experiential learning and experiential education, the authors are the first to acknowledge other problems with experiential learning and/or experiential education. For example:

- Experiential education lacks an adequate conceptual framework; the work in this area is of limited quality and slim quantity (Sexton and Ungerer 1975).
- Research on the educational value of experiential education is limited to a few studies and "surprisingly few of these come directly from the (profession)" (Ibid).
- The literature on experiential education is noncritical and nonevaluative (Ibid).

- Experiential learning (defined here as learning prior to enrolling in school) lacks proper guidance from instructors; there's no real means of evaluating what was learned (Arnold, no date).

- Action-learning, although well-recommended, is not well documented in terms of results; "...there have been only a few comprehensive studies of action-learning programs and these have produced little evidence that action-learning has so far done what is claimed for it" (Graham 1974:87 in Venn 1976).

- Haste and lack of conceptualization can lead to student disappointment at the lack of a rationale for experiential learning, poor assessment practices and not integrating experiential learning with classroom experiences (Knapp 1976).

- Concerning work experience, it would be helpful, Coleman notes, if the data on its effectiveness were as strong as the conflicting opinions about its value for young people (Coleman 1974:108).

- Sexton and Ungerer, in addition to their own critique, cite Sidney Hook's concern with the misinterpretation of Dewey. If we are to avoid equating all experience with education (a fateful mistake according to Hook), we must determine "which learning is to be emphasized by the educational community and which is not. Ironically, advocates of experiential education in search of a conceptual base have tended to avoid this question" which has led to the vague notion that all doing is learning (Hook in Sexton and Ungerer 1975:20-21).

- Finally, a recent paper by Harry Silberman (1977) cites five arguments that have been used against work experience. Very briefly, these are:

    - The job shortage argument--too much attention is being paid to the "supply" side of the job market and not enough to the "demand" side

    - The non-problem argument--youth isolation is not a problem; socialization value of work experience is overestimated

    - The big brother argument--work experience programs are too paternalistic

    - The spoiled child argument--work experience advocates are too soft on the young

    - The high-cost argument--the hidden costs make work experience too expensive

All of the above criticisms either come from or are addressed by advocates of experiential learning. In short, we need not turn to the opponents to identify the problems.

Again--Some Consideration of EBCE

Although we believe that many of the criticisms cited above describe considerably more attention than they have received to date, it is important to note that the work associated with EBCE should be viewed as a large step in correcting or alleviating some of these criticisms.

First, results of EBCE programs in terms of student outcomes are well-documented. Second, the developers and managers of EBCE programs have gone to great lengths to determine what kinds of learning to emphasize and what kinds of structure to provide. And finally, we believe the research and extension issues raised in this paper would, if addressed, strengthen not only EBCE, but also the experiential learning/education field in general.

Conclusion. One of the critical components of the solutions proposed by those who have studied the education-work relationship is some form of experiential learning. This phrase and its synonyms have not reached a point where a generally accepted definition exists. Moreover, there is confusion over the differences between experiential learning and experiential education. The advocates as well as the critics find fault with the research, implementation and measurement (to name three areas) associated with both experiential learning and experiential education. In spite of these problems, it is clear that opportunities for learning for the young can no longer be limited to school and that adults can not be denied the satisfaction of continued learning both on the job and through educational institutions. What is warranted, we believe, is a concerted effort to expand and strengthen the research base on the experiential learning process and on experiential education programs at the same time that development of experience-based learning programs continues. To assist in defining what such a research effort might consist of, we have selected working definitions of experiential learning and experiential education, identified some possible areas for research and presented a model for blending research and development through the extension of EBCE.

SECTION V: A Working Definition of Experiential Learning and Experiential Education

In our view, experiential learning is a process which occurs most frequently in an experiential education context. To help clarify the distinctions, we are presenting definitions of both the experiential learning process (from Coleman) and experiential education context (from Sexton and Ungerer).

Experiential Learning

In the NWREL Education and Work 5-Year Plan, we used Coleman's definition of experiential learning in our discussion of the need for research on the impact of such learning. We remain convinced that Coleman's definition is both thoughtful and useful. Since this definition is important to the research and development questions raised in a later section of this paper, we have included it in some detail here.

Coleman compares two patterns of learning, each of which is implied in a different theory of instruction. The two patterns are:

- Information Assimilation: "Learning...through instruction, in which information or knowledge is transmitted from an instructor to the learner"; and
- Experiential Learning: "Learning...through acting, and then experiencing or observing the consequences of action" (Coleman 1976:50).

From the perspective of the learner, the four steps involved in each pattern are (from Coleman 1976):

Experiential Learning	Information Assimilation
1. Acting and seeing the effects of the action	1. Receiving information
2. Understanding these effects in a particular instance	2. Assimilating and organizing information "so that the general principle is understood"
3. Generalizing; understanding the general principle "under which the particular instance falls"	3. Inferring a particular application from the general principle
4. Application "through action in a new circumstance within the range of generalization"	4. Moving "from the cognitive and the symbol-processing sphere to the sphere of action"

Each pattern is described further in terms of key properties, presented here in chart form:

Key Properties	Experiential Learning Pattern	Information Assimilation Pattern
Source of motivation	Intrinsic	Extrinsic
Dependence on symbolic medium (language)	Light; sometimes not at all	Very heavy
Ability to remember	Easier; depends on concrete	Harder; depends on abstract
Time/effort	Increased	Reduced
Weak points in the chain	Step 3: Generalizing	Steps 3 and 4: Particularizing and acting

In addition to the properties, most of which make experiential learning very appealing, Coleman speaks of two characteristics that make it beneficial at any point in the process of learning any knowledge. First, action provides motivation. Because action is the first step in the experiential learning pattern, this calls for an early "investment of self, which induces a certain tension that is only relieved when the activity is successfully performed" (59). Second, action provides a sense of accomplishment, mastery and self-assurance.

Coleman concludes by raising the problem of determining an appropriate mix of experiential learning and information assimilation. He contends that the current use of experiential learning is determined largely by the lack of a symbolic medium (i.e., language) on the part of the learning population (e.g., in young children and disadvantaged youth) when experiential learning might better be part of many activities involving many more learners. Finally, he reminds the reader that his comments on the appropriate mix of learning patterns are "intended primarily to raise issues for serious examination rather than to provide conclusive prescriptions" (61).

Experiential Education

The concern of the experts (and our concern) rests as much with the larger context in which experiential learning occurs as it does with the experiential learning process. It is this context which we are calling experiential education. Again, for the purposes of later discussion, we selected an existing definition as a starting point. (Although we feel these definitions are helpful, the reader may not

agree. We do trust that the need for a "starting place" and for internal consistency within this document, if not within the profession, is of enough importance to establish a baseline from which we can then proceed.)

Sexton and Ungerer provide the clearest description of experiential education. Although their definition was given earlier, we repeat it here:

> "...learning activities outside the normal classroom environment,* the objectives of which are planned and articulated prior to undertaking the experience, involving activity that is meaningful and real and on the same level as that of other nonstudents in the same nonclassroom environment, and in which the learner has the assistance of another person (most often a faculty advisor) in expanding the learning as much as possible that takes place in nonclassroom settings" (Sexton and Ungerer 1975:1).

There are some obvious contradictions between Coleman's experiential learning definition and Sexton and Ungerer's experiential education definition. For example, Coleman recommends a mix of learning patterns according to activity while Sexton and Ungerer refer specifically to activities outside the classroom environment. Although these differences deserve further thought and consideration, we believe it is important to recognize that these definitions clearly help distinguish between two separate but related learning events or levels. At the first level, we have the individual experiential learning process; at the second level, we have experiential education as the broader context in which we trust this process will occur.

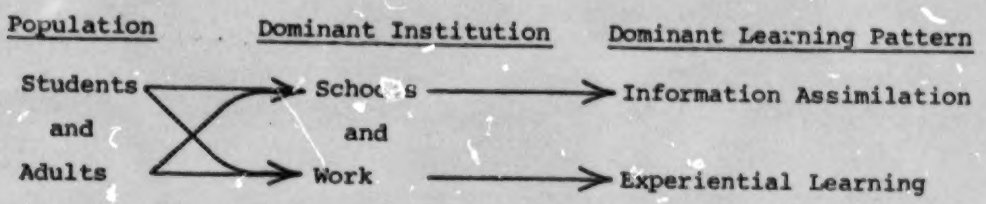
A Map of the Territory

Present. If one were to map the territory according to the present dominant institutions and learning patterns for students and adults, it might look like this:

Population	Dominant Institution	Dominant Learning Pattern
Students	Schools	Information Assimilation
Adults	Work	Experiential Learning

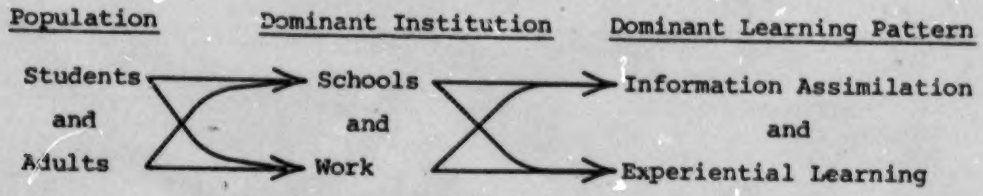
Although experiential education can occur in the classroom, this is presently more the exception than the rule.

A Context Model. One way to conceive of a change would be to emphasize the context in which experiential learning occurs. This would look like the following:



In this model, students and adults interact with both school and work experiencing both information assimilation and experiential learning but primarily in school and work respectively. This does not, we believe, account for experiential learning as a process nor does it account for or promote a mix of learning patterns.

A Context and Process Model. In this model, both the context and the processes are emphasized:



This model promotes an integration of learning patterns rather than identifying learning patterns with a particular context or institution. The model further acknowledges that information assimilation can and does occur at work as well as at school and that this is necessary. Finally, it recognizes both the experiential learning process and the experiential education context as primary considerations.

As a further illustration of the importance of learning processes, let us look briefly at four typical areas of school learning (Broudy, Smith and Burnett 1964):

1. replicative (repeating an operation as learned)
2. associative (cueing suggested responses)
3. applicative (applying knowledge flexibly to a new situation)
4. interpretive (conceptualizing from experience)

The authors made these distinctions because the use of each area of learning "denote(s) processes that are more or less independent of each other or that cannot be substituted for each other" (45).

If one accepts the four areas of school learning, and that the processes of using the learning are distinct, one might then conclude that the learning processes might also differ. For example, for replication and association, information assimilation might be sufficient. Application and interpretation, however, might include experiential learning. In short, no one learning pattern or process can be expected to account for all areas of learning.

SECTION VI: A Framework for Linking Research and Development

The following represents a framework for considering four areas of research that appear to be warranted and for establishing a link between research and development efforts.

		Experiential Learning/Education Research Areas			
		Basic or Fundamental	*Problem-Focused*	*Evaluative*	*Policy*
Experiential Education Development Areas	NIE-funded				
	Proposed for NIE funding				
	Non-NIE funded				

The Four Research Areas. A 1976 report prepared for NIE establishes the importance of distinguishing among kinds of research efforts (Radnor, Spivak and Hofler 1976). We agree that this kind of distinction, particularly when considering how data will be used, is necessary. We are suggesting, therefore, that NIE consider conducting research on experiential learning and experiential education in four general areas:

- Basic or fundamental research (i.e., "research to produce knowledge for its own sake").
- Problem-focused research (i.e., "research...to produce knowledge applicable to the solution of a specified problem")
- Evaluative research (i.e., "an interactive combination of evaluation and research")
- Policy research (i.e., research to produce knowledge for policymaking and policymakers)

The first three research areas (basic, problem-focused and evaluative) were identified by Radnor et al. in their analysis. The fourth area (policy), we have added for the simple but important reason that research findings are often used to establish policy but policy information needs are not always identified at the time the research is being designed. In general then, we suggest that if sufficient

consideration is given to the information needs in these four areas early in the design of any research effort, usefulness of all research efforts will be increased. (NOTE: Sample research questions organized by research area appear in Appendix A of this report.)

The Three Development Areas. Although research questions within each of the four research areas may not differ for each of the three development areas, we include all three in the chart to suggest the variety of research sources that are available. For example, some basic or problem-focused research efforts might yield more fruitful data if conducted in learning environments that are not necessarily funded by NIE. We would suggest selecting a development effort or context because it has the greatest potential for rewarding results rather than because of its funding source.

Assumptions. Our further assumptions about the framework are as follows:

- That both research and development are needed in experiential education
- That experiential learning deserves research so that the findings may be used in the development of experiential education programs
- That all cells in the framework are not of equal value to NIE or to the education profession
- That there is a relationship between experiential learning and experiential education
- That some research areas have received more attention than others (e.g., evaluative research on NIE-funded development efforts)

Some additional assumptions we make about the potential for a linked research and development effort are:

- That NIE may wish to begin such an effort by expanding the research base on experiential learning and experiential education via NIE-funded development efforts
- That not all current and proposed development efforts can or will lend themselves equally well to such research
- That EBCE has many characteristics that make it a likely place to introduce such a research component. For example:

  -- Development efforts have gone on for six years.

-- The evaluative research component is well underway.

-- Findings are such that it is likely that additional research would yield helpful results.

-- The parties involved are "comfortable" with the program.

-- All parties are familiar with the data demands that accompany participating in a development effort.

-- EBCE is well documented.

-- Extension of EBCE is underway.

-- More extension is contemplated involving different populations from those now being served.

The research and development framework posed here, together with our assumptions about that framework and about the potential for linking research and development particularly as EBCE is extended to different populations, leads us directly into a discussion of three populations which we believe would both benefit from an extension of EBCE and contribute to a substantial research effort.

SECTION VII: Extending EBCE to Three Populations

At the same time that we advocate research focusing on experiential learning and experiential education, we believe more can and should be done about extending EBCE to other populations. We do not believe that the introduction of research or of a research component should inhibit current or proposed development efforts. Rather, it should be viewed as a complementary effort designed to strengthen existing and future experience-based programs. The work to date is too valuable and valued to stop; the problems associated with school and work are too great to dismiss; the voice of the experience-based learning advocates is too strong to ignore. And, finally, we need real-life settings to conduct the kinds of research described in the preceding section.

To that end, we would like to expand on ideas presented in the 5-Year Plan concerning the possible adaptation of EBCE with three groups:

1. Junior high school gifted and talented students
2. Adults as part of the lifelong learning effort
3. Teachers in training (undergraduate and on-the-job)

Each group, we believe, can not only benefit from being part of EBCE but also contribute a great deal to the knowledge base about EBCE, about experiential learning and about experiential education. Let us look briefly at each of the three groups and why each could benefit from an EBCE extension effort. Finally, following the discussion of the three populations, we have described a research and extension process model appropriate for all three populations.

Gifted and Talented Junior High School Students

Needs of the Gifted

Giftedness describes unusually advanced growth in various facets of human development. Numerous research studies have delineated the unique developmental and learning needs of gifted and talented students (Delp and Martinson 1975). A study by Plowman (1975) dealt specifically with rural gifted students but the concepts can be generalized to the total population. Plowman listed the "key words" as: identification, placement, access, involvement, motivation, acquiring higher aspirations, and receiving individualized instruction and opportunities for independent learning.

> "(Gifted and talented youth) need to be introduced to persons who can meet them in a human-being-to-human-being encounter,

are especially knowledgeable, possess contructive discontent, tend to play with ideas, and who create new ideas and other products as a result of their own sensitivity to problems, flexibility, fluency and originality" (Plowman 1975:58).

The gifted and talented typically can master the standard curriculum in one-third of the time other children take. Ramas (1975) reported the normal school curriculum calls for a 70-30 time split between teaching basic skills and time devoted to higher cognitive learning (reasoning, drawing inferences and reaching conclusions) while the gifted child seems to need the reverse emphasis. Pupils who are advanced four or more years on the average beyond their contemporaries need to work with content and ideas appropriate for them. Students with specialized talents need tutorial attention at the level of their capability if they are to improve (Marland 1971).

Many authors (Delp and Martinson 1975; Runyon 1975; Ramas 1975) have expressed concern that gifts and talents not identified and reinforced may become atrophied or even lost. In an effort to maintain and expand a student's initial enthusiasm for learning instead of having it change to "boredom, behavior problems, physical and emotional distress and finally inertia" (Kennard 1975:v), qualitatively differentiated programs within the school day must become a priority and ultimately a reality.

In a report to Congress, the U.S. Office of Education explored the educational implications of research on the gifted and talented and reached the following conclusions:

- "Gifted and talented youth are a unique population differing markedly from their age peers in abilities, talents, interests and psychological maturity.
- They are the most versatile and complex of all human groups and the most neglected of all groups with special educational needs.
- Their sensitivity to others and insight into existing school conditions make them especially vulnerable because of their ability to conceal their giftedness in standardized surroundings and to seek alternative outlets" (Marland 1971:109).

Some of the special problems young gifted and talented persons experience about careers deserve to be mentioned here. First, many gifted and talented young people can succeed in any number of careers making choice, for them, an especially perplexing and complicated process. Second, their parents, friends and society may have high expectations which tend to restrict the range of choices for gifted youth. Third, many careers gifted and talented young people select require many years of advanced training and require a strong and early commitment. Fourth, some are having

difficulty in school--perhaps because they are bored or not motivated--which adds to the pressure. Fifth, it is unlikely that the kinds of jobs open to young people will provide exposure to the kinds of careers gifted people are interested in and should have the opportunity to explore. And last, "It appears highly unlikely that the degree of challenge needed by gifted and talented persons, in almost any area of their lives, is to be found within the confines of an elementary or secondary school building" (Hoyt and Hebeler 1974:150).

Past Programs for the Gifted

Tannenbaum, in a historical review of special provisions for the gifted, reported that programs have been perceived as luxuries rather than necessities in the educational enterprise.

> "...the gifted get their fair share of stimulation at school only when there is enough money to pay the bill and their cause is supported by public figures whose opinions command attention" (Tannenbaum 1975:27).

Although special programs have been conducted over the last half century, they have reached only a few students and have never been widespread even during periods of high interest (Marland 1971). In its Congressional Report on the gifted and talented, the U.S. Office of Education gave a conservative estimate of 1.5 to 2.5 million gifted and talented children out of a total elementary and secondary population of 51.6 million (in 1970). Of the schools surveyed, 57.5 percent reported they had no gifted pupils. Fewer than 4 percent of those identified were benefiting from the existing school services for gifted and talented students. Even in localities and states where there were legal or administrative directives for providing special services, little was accomplished due to other funding priorities, more threatening crises and the absence of adequately trained personnel (Marland 1971).

Present Focus

There are unmistakable signs of revival of interest in the gifted according to some authors. A 1970 Congressional mandate added Section 806, "Provisions Related to Gifted and Talented Children," to the Elementary and Secondary Educational Amendments of 1969 (Public Law 92-230). The target population was defined as the upper 3 percent to 5 percent of school-age children who show outstanding promise in general intellectual ability, specific academic aptitude, creative or productive thinking, leadership ability, visual and performing arts, and psychomotor ability. The stage was set for "doing something significant about the deteriorated condition of programs for the gifted" (Marland 1971).

In 1974, the Office of Gifted and Talented (OGT) was established as part of the U.S. Office of Education and full recognition of the federal role in educating gifted and talented youth resulted in passage of Education Amendments Section 404 (Public Law 93-380). This is the initial legislative authority for a program of categorical support for this population and authorizes an annual appropriation of close to $3 million for three years. The emphasis is on using a catalytic strategy for stimulation and support of state leadership and excellence of programming at points of impact that are critical in the development and delivery system for education of gifted and talented children and youth.

At the state and local levels, teams participated in Leadership Training Institutes to plan for these young people. Almost every state now has a coordinator of programs for gifted and talented youth. In Michigan (to site the emergence of programs for gifted and talented in one state), a bill was passed in 1974 mandating a State Commission on Gifted and Talented. Michigan now has a state plan for gifted and talented youngsters and, as of November 1976, there were 12 pilot projects for gifted and talented operating in that state (Trezise 1976:241).

Education-Work

How much attention, one might ask, is being paid to the education-work problems of gifted and talented youth? Shouldn't we expect that the problems and difficulties recounted earlier about youth in general would affect gifted young people, too? And shouldn't that mean that special programs or projects have been developed for these young people to begin working on these problems? The answer to the latter question, according to Hoyt and Hebeler, is a resounding no.

> "Efforts to locate career education programs for the gifted and talented have for the most part been unrewarding. The U.S. Office of Education, bibliographic references, leading experts in the fields of both career education and the gifted, state and local education authorities, and individual educators have all been consulted with frustrating results" (Hoyt and Hebeler 1974:209).

The programs Hoyt and Hebeler located were primarily for high school students and most of these were "oriented in the university atmosphere" (210).

Junior high gifted and talented students, then, are a likely group for EBCE. Let us now examine briefly the needs and problems of the two remaining groups--adult learners and teachers.

Adult Learners

In 1971-72, almost 16 million persons over the age of 17 who were not full-time students participated in adult education programs. This means that one out of every 8 eligible persons was in some formal adult education activity (Gilford 1975). Between 1969 and 1972, enrollment increased 20.7 percent, far exceeding the growth rate of 6.4 percent in the eligible population.

Of those participating in adult education programs:

- Almost 50 percent were in occupational training programs
- Twenty-six percent were in general education programs (e.g., high school and college level courses for credit)
- Thirty percent had college degrees
- Only 4 percent had no high school diplomas
- Forty-five percent were over age 34; 15 percent were over age 44
- Slightly more women than men participated in programs (Gilford 1975).

During that same time period, it is estimated that 60 million persons were engaged in learning activities "sponsored by organizations outside the regular schools and colleges" (Long 1974:5).

According to more recent data from the National Center for Educational Statistics (NCES), a record number of 17,059,000 Americans over 17 were enrolled in adult education activities in 1974-75. In that year, much like 1971-72, nearly 43 percent of the participants were enrolled in occupational training programs and close to 25 percent were in general education programs. According to NCES, two-year colleges showed an increase of 17.9 percent in adult education attendance and the Labor Unions and Professional Training category showed an astounding jump of 64 percent. (This latter increase may be due, in part, to a reconfiguration of categories in the 1975 report.) Overall, despite the growth in business and industry training programs, two- and four-year colleges still represent the most frequent sponsors of adult education activities.

Some Reasons for Adult Education

In a recent survey, potential adult learners selected vocational subjects as their first educational choice (43 percent). Tieing for second place with 13 percent are general education, hobbies and

recreation (Cross 1974:20). This emphasis on occupational and personal enrichment courses is consistent with the pattern of choice in past years and reaffirms some if the issues stressed by current writers. McClusky, Wirtz and others, for example, point to the urgent needs adults have or will have in coping with change in our society, keeping up with their professions and responding to increased leisure time. Specifically:

- Learning must be interwoven throughout one's lifetime in order to overcome "the time traps of education for youth, work for adults" (Wirtz 1975:112).
- Trial and error or uncritical application of what was learned in the past are inadequate ways of coping with today's pace of change.
- Adults need skills pertinent to the changing requirements of life and work.
- Rapid technological change is necessitating continuous professional updating to keep on top of one's specialty or to learn a new one.
- Non-work time is going to increase through early retirement, shorter work weeks, options in work scheduling, etc.

At the same time that more people are turning to some form of adult education, three themes are emerging in the literature. First, adult education as it is traditionally structured may not meet adult learning needs or provide sufficient learning opportunities for coping with today's world. Second, alternative programs are experiencing some difficulties. And third, we have yet to develop successful strategies for lifelong learning. Let us look briefly at each theme.

Traditional Adult Education Programs

Since the two-year college is one of the key providers of adult education, both the description of that institution and the problems the Coleman Panel found with it are relevant:

> "...the public two-year college is based on a local catchment area, takes all students, is free or low cost, and is nonresidential, with students commuting from home. With its open door, it intends to be comprehensive across social strata and races and comprehensive in curricula, assembling in one place transfer programs, one- and two-year terminal programs, adult or recurrent education, and now an increasing amount of remedial or subcollege work that permits students to repair the damage sustained in earlier years of schooling....The community colleges have

difficulty in maintaining a balance among their programs since the general tide is toward high status for the transfer work, low status for the terminal, and marginality for the adult courses" (Coleman 1974:88-89).

Hesburgh believes the focus of adult education programs is too narrow and the use of the school as the learning environment is too dominant.

> "Continuing (versus traditional) education programs are unlikely to be achieved until institutional leaders, including those in continuing education, develop ways of employing the community as part of the learning pattern of the colleges and university, thus reinforcing learning with experience" (Hesburgh 1973:40).

Adult education, particularly as it is offered in most four-year colleges, is still a secondary activity. In spite of the fact that its clientele is growing, "adult education is in too many instances compelled to pay most, if not all, of its way in programs of university extension" (McClusky 1974:98). Adult education remains largely dependent on educational institutions with different priorities and with little additional money to support new or alternative programs for adults.

Although adult education programs have often been responsive to their clientele's professional training needs, Knowles alerts us to one of the problems in this responsiveness. Many adults are already conditioned by earlier educational experiences to be passive learners, particularly when they are in a school environment. Because of this Knowles tell us not to expect that adult learners will suddenly have the skills and attitudes necessary to take responsibility for their own learning (Knowles 1975). Despite this Knowles argues that education must resist continuing with the familiar and grapple with new strategies that emphasize learning how to learn. Houle further challenges current adult education practices by stating that theory and practice will not progress very far until they are based on an understanding of how mature people approach the tasks and opportunities of adulthood (in Collican 1974). Mead, in addition, reaffirms that adults need to struggle with the complex, real problems generated by the everchanging social and natural environments (in Bauer 1975).

Adults as Learners. A number of studies have found that adults do a significant amount of self-planned learning without assistance from professional adult educators. The learning projects adults engage in are specific, personal and individualized efforts. Although more formal group learning often does not fulfill personal needs/goals, adults are also not totally satisfied with many self-initiated learning activities. Those interviewed in one research study noted difficulty in planning learning projects, identifying resources, and evaluating their progress (Collican 1974).

Other research tells us that adults do not value learning for learning's sake. Adults was knowledge that is useful and that will help in

day-to-day living at home, on the job and in leisure time. "How to" courses rank high compared with courses in biological, physical and social sciences, community problems and public affairs (Carp, Peterson and Roelfs in Hesburgh 1973).

Learning in society has traditionally been directed to achieving specific needs, i.e., citizenship, occupations, affiliation and leisure. The emphasis on fulfilling one's potential through "learning over a lifetime" is recent, however (Long 1974:4).

Knowles addresses the adult focus on self-planned, useful learning that meets specific needs in his definition of "andragogical learning":

> "The core concepts of andragogical theory are that adults have a psychological need to be self-directing; that their richest resource for learning is the analysis of their own experience; that they become ready to learn as they experience the need to learn in order to confront developmental tasks; and that their orientation toward learning is one of concern for immediate application" (Knowles 1975:87).

Few adult education programs, however, provide opportunities for immediate application, and this presents problems for adult learners.

> "Adults participate in instruction expecting immediately to apply what has been learned. When the instruction does not satisfy the desire the students do not register again or seek elsewhere for learning opportunities" (Bauer 1975:96).

Some Alternatives to Traditional Programs

Recent years have seen a growth of approaches to meet the needs of adult learners and to resolve the education-work dilemma: cooperative work-study, study abroad, advanced placement and independent study. External degree programs hope to blend campus and community and to affect better integration of education-work (Hesburgh 1973).

A report by the Ford Foundation describes some of the Ford-funded programs available as alternatives to traditional educational programs. Among these are:

- University of Mid-America where TV and other mass media are used
- University Without Walls, a national network involving 29 institutions where students have alternative ways to obtain degrees (e.g., off-campus learning, independent study backed by contact with faculty, etc.)

- Empire State College which offers a contract learning program and mentors who work directly with students

- Regents External Degree Program where students can get degrees through self-directed study and credit by examination

- Regional Learning Services, an educational brokering program which matches student needs with available programs (Ford Foundation 1976)

While these programs offer stimulating options for adults, alternative programs in general are not without their problems. For example, instructional methods in many nontraditional programs are often very traditional. "Most nontraditional programs use the old standby of lectures and class discussion; they first transport it to off-campus locations, usually regional learning centers" (Cross 1974:5). Newer programs are, however, trying to help adults transfer theory into practical application through field work, cooperative education and providing instruction at job sites.

Granting credit for work experience prior to enrollment in a program is still a problem area. "We don't have adequate measures for determining knowledge and skills gained from work experience" (Sharon 1975). A recent survey of 266 two- and four-year colleges showed that 85 percent sponsored programs involving work experience and granted credit for these experiences. Less than a third, however, granted credit for work experience that occurred before the student enrolled in school (Willingham 1974 in Sharon 1975). Although the CAEL Commission is working to resolve problems in granting credit for experience, most educational programs have only begun to experiment with possible options.

Advice and Recommendations

There is, as one might imagine, much advice offered by those involved in adult education or, more precisely, those advocating and planning for lifelong education. We include some examples to demonstrate the extent of the concern and the strong plea for different (not just more) educational opportunities for adults.

From Long (1974):

- Stop preparing people for a static society.

- Emphasize learning to learn.

- Base a new sequence of learning on questions that arise out of life experiences "...which means exposing the learner to the issues, conflicts, contradictions and tensions and change in society at each stage of development" (10),

and helping the learner develop the skill to formulate questions that must be answered in order to deal successfully with experience.

- Adult educators must be as concerned as youth educators with extending the learning environment, individualizing instruction, fostering learner-initiated activities, multi-age grouping, etc.

From Hiemstra (1974):

- The teacher role must shift from information transmitter to facilitator of learning activities.

- Teachers and administrators need to learn how to use the total resources of a community; how to create opportunities for learning how to learn.

From Hesburgh (1973):

- Don't limit learning to classrooms; include careers and other life pursuits.

- Build a new learning system that combines the intellectual vigor of the academic system with the authenticity of life experiences.

- Make entry and exit easier and attach no penalty to either.

- Make learning better integrated with careers and more accessible by using new technology.

- "Lifelong learning should be guided by public policies that encourage the systematic integration of learning opportunities with the needs of people at different stages of life" (14).

- "Conduct research on what motivates adults to learn and which materials teach a subject best (to) result in an expansion of educational opportunities to assist independent learning" (25).

From Bauer (1975):

- Make the student, not the program, the focus of concern if we intend to maintain the student's interests.

From McClusky (1974):

- Early learning must be reevaluated so that it becomes preparation for continuous learning.

- Emphasize learning how to learn rather than accumulating facts.

Overall, adult education opportunities and learning environments have just begun to address the education-work relationship. EBCE, then, with its emphasis on experiential learning and fostering learner-initiated activities, holds the potential for offering considerably more and better learning opportunities for adults both in work and school.

Teachers--Undergraduates and On-The-Job

In the preceding pages in this section, our focus was primarily on the problems identified with and programs available for gifted and talented students and adult learners. Here, we would like to shift our attention to the problems of teachers and what they face in trying to implement experiential education programs. Whether we are talking about teachers in self-contained classrooms, learning managers in alternative programs or college professors, there is a need for improving student learning activities. As long as learners are under the direction of someone, that someone needs to be properly and effectively trained before we can expect the many concerns and recommendations raised throughout this paper to be addressed.

Implications of the Experts' Recommendations

First, let us look briefly at two of the recommendations raised earlier and the implications for today's and tomorrow's teachers.

- Restructure education so that it includes but is not limited to school.

  Although this recommendation involves much more than the classroom, its implementation hinges in part on what occurs in the classroom. Although agreement may be reached at the district and building levels to have students spend time in the community and at places of work, it remains with building administrators and classroom teachers to plan exactly how and when nonschool activities would take place. Teachers need to know what the followup classroom work should be, how to emphasize work and careers in the classroom, and so on. Success is not guaranteed if teachers are involved in change; failure may be guaranteed, however, if teachers are not involved.

- Design an appropriate mix of instructional activities to provide for experiential learning as well as information assimilation.

  Currently, the assumption is that most classroom learning is information assimilation and nonclassroom learning is experiential. Coleman, as we discussed earlier, advocates a better mix of these two patterns. If this mix is to be achieved in the classroom, teacher understanding and cooperation must be gained.

Why Students and Not Teachers?

If we believe what Coleman has to say about the value of a mix of experiential learning and information assimilation, why then should we not provide this form of learning for those whom we hope will employ it? Why leave teachers out as participants in the experiential learning/experiential education movement, only to invite them in as facilitators? Should we not offer the same kinds of opportunities for the instructors as we do for the students? When teachers are learners--both as undergraduates and as participants in staff development sessions--might it not be wise to have them experience firsthand the kind of experiential learning and education we hope they will support for their own students?

A Role for Colleges of Education

In a speech given at a College and University Staff Development Workshop, Robert Taylor spoke of the role colleges of education should play in career education. We believe his points are equally valid in the broader context of experiential education. Colleges of education, according to Taylor, should provide leadership in career education as well as demonstrate career education in their own settings. Concerning the latter point, Taylor urges our educational institutions to "practice what they preach" (Taylor 1976:35). Taylor goes on to say that undergraduate teachers need to be literate in career education--they need to know the concepts behind the movement. More important, perhaps, is his point that undergraduate teachers ought to be doing career education; "the college should have awareness and exploratory programs; it ought to be rich in field-based learning and contact with real world settings and people" (37).

Daniel Arnold, an Associate Dean for Teacher Education, describes schools of education in the following way:

> "The school of education on most university campuses is in a somewhat schizophrenic position. It is not entirely compatible with arts and sciences schools because of its professional school orientation. It is not completely at

home with other professional colleges because the larger proportion of education students are undergraduates. It has a great deal more at stake in the adequacy of general education programs than almost any other school because its graduates will become the purveyors of general education to most of the population" (Arnold, no date:4).

He advocates meeting the double need of a strong general education and a strong professional preparation through experiential education. Through experiential education, he believes, we can realize the following advantages:

- "Concurrency of theory and practice
- Graduates who are problem identifiers and with ability to apply educational skills to problem solutions
- Positive student input into the design of instructional programs
- The addition of the human resources of the community for educational advantage" (12).

Finally, he reminds us of the difficulties of implementing such a program. First, the faculty must be willing to commit time and effort to such a program. Second, experiential education demands additional funds. Third, it may not work in some academic areas. Fourth, students may have problems functioning in a free learning environment.

In a discussion of an experiential approach to training teachers, Olsen cites the research evidence that teacher attitudes do have an effect on students (Olsen 1975). If teacher attitudes toward experiential education are not based on direct experience, we may be overly optimistic in expecting them to hold positive attitudes about such programs. On the other hand, if teachers--either as undergraduates or through professional training--can experience nonschool learning situations and learn firsthand what is valuable in such experiences, we will at least have teachers with informed opinions and, at best, teachers with positive attitudes.

The Need for Continuous Training

Experiential programs and experiential learning cannot survive and grow over time unless they become part of those persons entrusted with the education of our youth. It is the teachers who will or will not perpetuate experiential learning on a widespread basis. Therefore, both the concepts and methods must be transmitted to present as well as future practitioners.

The report of the International Commission on the Development of Education reminds us that today's graduates will still be teaching after the year 2000. The report goes on to recommend that teachers be trained as specialists in organizing learning activities and in organizing learners of all ages for education in and out of school (Gibbons 1976).

Spillane and Levenson state, "The essential purpose of the public schools is to educate students to function in society. That skill can be taught only by teachers who are aware of the great and small changes within the immediate community and the wider world. Teacher training should be a continuing, never-ending process, closely related to the reality of the life of children and families" (Spillane and Levenson 1976:439). Since teachers often imitate the way in which they themselves were taught, it follows that if students are to be open to learning from their own experiences, teachers have to learn how to provide such a learning environment.

Lack of Experiential Education Programs for Teachers

A review of the literature, as well as conversations with staff of leading teacher preparation institutions, indicate that few teacher preparation institutions are doing much in the area of experiential education for teachers. One exception frequently mentioned is the University of Kentucky. Significantly, Robert Sexton, author of the working definition of experiential education, is also Executive Director of Experiential Education at the University of Kentucky.

In summary, it appears that the following deductions can be made. Experts are demanding change in education using experiential learning and experiential education. In order to effect these changes, different ways of preparing teachers have to be designed and implemented. Extending experiential education and thus experiential learning to teachers represents a powerful approach. This is, however, occurring only on a limited scale. There is a need to extend this experience to undergraduates as well as to teachers in staff development programs.

Conclusion. All three populations--junior high gifted and talented students, adult learners and teachers--are viable potential participants in an extension of EBCE. Since we are advocating not only that EBCE be extended but also that research on experiential learning and experiential education be designed and carried out, we turn now to a process model which we view as a necessary support system to insure the feasibility of both these efforts occurring simultaneously.

SECTION VIII: A Process Model for Extending Research and Development on Experience-Based Career Education

In deciding how best to describe what might occur in a research and extension effort for gifted and talented students, adults and teachers, we considered two alternatives. First, we could develop highly specific proposals/plans for each of the three groups. Second, we could describe a process that would support such an effort for all three groups. Although the first option would be helpful at the practical level (e.g., it would give the reader three specific plans to review; it would identify numbers of persons, precise dates and definite products, etc.), we believe it would seriously detract from the general policy level of this paper. * Thus, we decided not to propose specific programs in this paper but rather to describe a process model we believe would apply for all three groups. Our emphasis is on the general structure and functions associated with supporting research on experiential learning and experiential education at the same time that EBCE is extended. (For an example of what the process would "look like" when applied to one specific population, see Appendix B.)

Advice from Fullan and Pomfret. Our decision to focus on the process of implementation (from design through dissemination) is based largely on a review of implementation literature and specifically on advice and recommendations offered by Fullan and Pomfret in their Review of Research on Curriculum Implementation (April 1975). Their overall conclusion after reviewing the research is that "the issue is not so much whether one can measure and assess degree of implementation, but whether the implementation process itself is conceptualized as a problem to be addressed" (Fullan and Pomfret 1975:121). In their discussion of planned educational change, they point to the importance of recognizing implementation as a "negotiation process consisting of conflict, producing anticipated and unanticipated problems which should be prepared for prior to attempting implementation" (112). An equally important consideration is "the distinction between the user and managerial orientations" to implementation.

The concern for users as "active and autonomous participants with their own interests, conceptions and resources" together with the importance attached to the implementation process is sufficient rationale, we believe, for the research and extension process model described here.

**For specific work plans for extending EBCE to each of the three populations, please see the NWREL Education and Work 5-Year Plan.*

The process model consists generally of four phases:

1. Project design
2. Project implementation
3. Project research and evaluation
4. Project dissemination/diffusion

The four phases are not mutually exclusive nor are they necessarily sequential. Implementation may overlap with design; research and evaluation may begin during design and continue throughout implementation; dissemination need not wait until all activities in the other three phases are completed. Since our focus is on the processes associated with each phase, we have chosen to discuss them separately.

Phase I--Project Design

Although EBCE is, at this point, a "designed" project, we recognize the importance of tailoring the program according to the needs of the users (identified here as the three key populations and associated persons involved in implementation). Thus, we are calling this phase of the process "design" and calling the outcome the "extension." In general, we believe that the following guidelines would support a design effort that would permit both the needed research and the development/extension work to be conducted separately for each of the three proposed groups.

Guideline 1: Set the parameters for design.

Before contacting potential users, it is necessary to examine each component of EBCE as it now exists in order to assess what can be changed and what could or should be retained to support a combined research and development effort. This process would involve the EBCE developers and NIE so that the parameters for design are mutually agreed upon and a baseline is available for negotiation with potential users to help them decide whether and under what conditions they will participate.

Guideline 2: Establish criteria for participants.

Developers and researchers will need to set some criteria for participation for each of the three populations. Some criteria may be common to all three (for example, evidence of a prior commitment to change in a direction consistent with EBCE and with the experts' recommendations mentioned earlier in this paper). Other criteria may be unique for each population (for example, having a process for identifying gifted and talented

junior high students). Although not all criteria may be met, all parties should be aware of the expectations of the developers and researchers.

Guideline 3: Review existing non-EBCE experiential education programs.

To assist in the design process, developers and researchers should have knowledge of experiential programs that could serve as a resource pool of alternatives. The University Year for Action Program at the University of Kentucky is an example.

Guideline 4: Explore options with potential users.

Prior to any contractual agreement, it is important that potential users thoroughly understand EBCE, the options for change and the criteria for inclusion. Users would identify components and activities in EBCE they would find difficult or impossible to implement. This step would, in effect, begin the implementation negotiation.

Guideline 5: Identify "extension" users.

This must be a mutual selection process. Users must want EBCE and be willing to participate in the remaining design work and in the three other phases; developers and researchers must be convinced that the users can and will participate in both the research and development efforts.

Guideline 6: Establish a design task force.

Before changes are made in EBCE, a design task force should be chosen by each of the three user groups. (This work, and all other work, would be conducted according to timelines developed for each population.) Task force members should represent all key segments within each user group. For example, membership might include students, resource persons from the school or district, community persons, teachers and administrators. The design task force, working with the developers and researchers, would identify items such as the following:

- What's different about this user group that necessitates changing EBCE to respond to those differences?
- What are the real-world constraints that might create problems in implementation?

- What kind of information-sharing procedures will be needed to develop and sustain commitment throughout the process of implementation?

Guideline 7: Establish working teams.

When proposed EBCE modifications have been described sufficiently by the task force, work teams (consisting of users and research and development personnel) such as the following might be designated to begin the design:

Development Team

Purpose: To rework written material as necessary; to prepare new material; to design strategies to meet needs identified by the task force

Community Liaison Team

Purpose: To prepare information about the program for use with and by the community; to meet with community people about the program

Training Team

Purpose: To design orientation and training strategies for all involved user groups (i.e., students, parents, teachers, administrators, community persons)

Documentation Team

Purpose: To document the process and the products coming out of the design work for analysis purposes and for eventual use by other modifiers of EBCE

Research Team

Purpose: To make certain that opportunities for research on experiential learning and experiential education are built into the design; to introduce research needs as the project is being designed

Evaluation Team

Purpose: To prepare an evaluation design; to insure that significant evaluative research questions can be addressed as part of the design

Implementation Team

Purpose: To work with other teams during design, identifying potential implementation problems; to begin preparing for implementation based on the emerging design

Dissemination Team

Purpose: To develop or modify existing dissemination strategies in anticipation of later dissemination efforts; to share information about the design effort locally and regionally/nationally as appropriate

Those who might serve on these teams would include:

1. Student representatives
2. Teachers
3. Professional EBCE research, development and evaluation staff
4. Community persons
5. Specialists for each user group as necessary

By serving as members of the Design Phase teams, users would be carrying out functions apart from and in addition to their customary roles. For example, students would also be developers, community persons would also be training designers, etc. Part of the responsibility of the teams would be to institute a user review process to give others not on teams an opportunity to review progress and make suggestions.

All design work (and especially that conducted by the teams) must be carried out in a manner which gains the support and understanding of all involved. This is particularly important if we view this as an opportunity to expand what we know about and mean by experiential learning and experiential education through EBCE as well as a chance to extend EBCE.

Phase II--Implementation

During this phase, it is critical that the pressures of implementation not be allowed to overwhelm the process itself. As the design becomes a reality and as users, developers and researchers become immersed in the daily operation of and participation in the "extension,"

we recommend that guidelines such as the following be implemented to insure continued collaboration and the gathering of data on research and extension.

Guideline 9: Expand the implementation team.

During implementation, we recommend that the implementation team be expanded to include a representative from each of the other teams mentioned under Guideline 7. All implementation team members would then serve as communication links between users, designers and non-user developers, researchers and evaluators. The decision as to whether the other design teams should continue or disband should be reviewed periodically during implementation.

Guideline 10: Hold open forums on research and evaluation.

Since both research and evaluation are key areas within the entire implementation process, it is important that all users have frequent opportunities to learn more about what is happening in each area. This is not to suggest sharing premature findings or results, but rather to increase awareness about and build commitment to both endeavors.

Guideline 11: Conduct periodic reviews and updates of the design.

Just because one crosses the threshhold to implementation does not mean design is complete. Mechanisms for review of design decisions need to be in place in the event those decisions aren't working.

Guideline 12: Maintain multiple roles.

In the Design Phase, we advocated having users become involved in different developmental processes as an extension of their own roles in the EBCE adaptation. We envisioned this happening as working teams were identified (Guideline 7). The ability to experience and examine implementation from more than one perspective may also be of value to the research and extension effort. Thus, we suggest that, in the Implementation Phase, users continue to be encouraged to participate in roles other than those they customarily assume. For example, program staff may be functioning at various times as designers, researchers and documenters.

Phase III--Research and Evaluation

Although this phase occurs throughout design and implementation, we believe some additional guidelines will help insure that the activities produce the desired information, have the support of the users and occur smoothly.

Guideline 13: Clarify users' research and evaluation responsibilities.

In conjunction with Guideline 12, we would recommend that users who have been active in earlier team work be identified as lay counterparts to those whose primary work is in research and evaluation. The specific functions these persons might perform would be determined during the design phase and training provided to increase competence and confidence in these important functions. One example that comes to mind, of course, is involving program staff in data collection and analysis.

Guideline 14: Establish a question and answer mechanism.

As many times as the purposes and procedures involved in research and evaluation are discussed, there are always questions that arise during the actual carrying out of these activities. We recommend that a mechanism be available to permit the asking and answering of such questions. For example, users working with the researchers and evaluators (as described in Guideline 13) might be in the best position to identify problems other users are having understanding or carrying out research and evaluation tasks. They might then work with the researchers and evaluators to develop nontechnical answers and explanations that would be distributed in a local newsletter or addressed at the forums described in Guideline 10.

Guideline 15: Expand the problem-solving network.

It is often the case that problems arising during research and evaluation are assumed to be the total responsibility of the professionals working in those areas. We would advocate that, where possible, those problems be shared first with user-researchers and user-evaluators and then with a broader user group to get their advice about solutions. Problems and advice would probably center around logistics more frequently than around the research design. The forums (Guideline 10) would serve as one mechanism for this exchange.

Phase IV--Dissemination/Diffusion

This phase of a program or project can also benefit from continued user involvement and assistance. To insure that involvement is provided for, we recommend the following:

Guideline 16: Increase the responsibilities of the dissemination team.

During the Design Phase, we advocated forming a dissemination team. We recommend that as the "extension" moves into implementation and as the research and evaluation work proceeds,

this team be given more responsibility for finding or developing materials for dissemination and identifying audiences and ways of sharing. Students may want to write an article of their own about their experiences in the "extension" for a journal. Teachers and students together might invite their counterparts from other schools in the district to experience a day in the life of the "extension."

Guideline 17: Establish in-project as well as out-of-project dissemination vehicles.

A common complaint from users is that evaluators come in, collect data and never share their findings with those who were evaluated. Generally, we recommend that mechanisms be established for sharing results as well as for communicating what others outside of the research and extension effort are reading and hearing about the work.

Conclusion. We have proposed a process model consisting of 17 guidelines throughout four phases to support a) the extension of EBCE to three new populations and b) the research on experiential learning and experiential education. The four phases may turn out to be too few or too many; the 17 guidelines are even more likely to change. Our concern, once again, is not that these exact steps be followed but that a process model be used to provide a strong support system for the proposed research and extension effort.

SECTION IX: Conclusion

Throughout this paper, we have attempted to demonstrate that:

- not enough is known about experiential learning and experiential education

  and

- the development and extension of experience-based educational programs is warranted.

Although these points may appear contradictory, the need for research does not, in our opinion, cancel out the need for experiential educational alternatives. The problems young people and adults face in school and at work can not be temporarily shelved while we increase our knowledge base. Although research and development have a linear history (at least on paper and in design), that has never stopped schools from responding to their real-world constituency. What we have tried to show here is that it is possible for NIE to continue to develop responses to real-world problems while simultaneously improving and increasing the knowlege on which these responses are based.

Overall, our conclusion is that NIE can and should:

1. Support research on experiential learning and experiential education based on carefully thought out research questions designed to increase knowledge, solve problems, determine outcomes and direct policy.

2. Continue development of experience-based education programs and approaches.

3. Use the "extension" of EBCE as the vehicle for a) providing experience-based education to groups not yet participating and b) conducting some portion of the needed research in tandem with this extension.

4. Promote the use of a "support system" (such as the guidelines presented in Section VIII) to better insure the success of the extension and of the research.

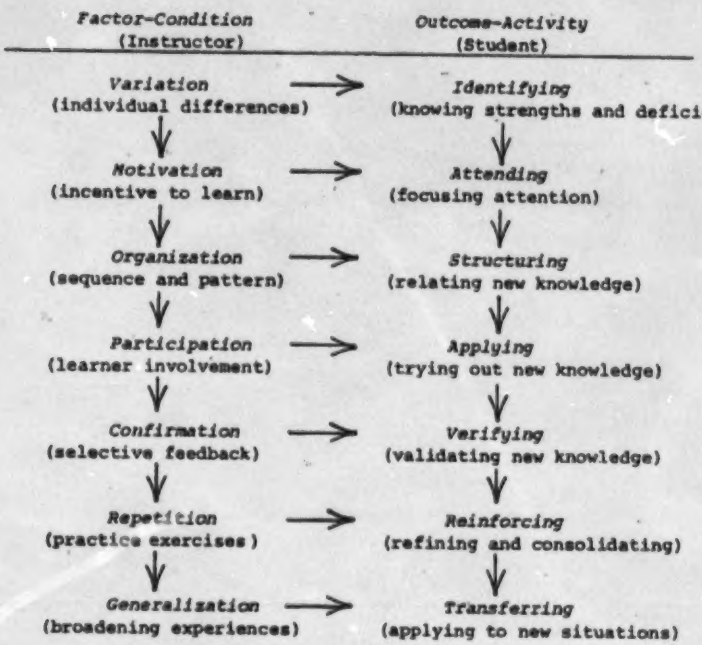
APPENDIX A: Sample Research Questions for Four Research Areas

1. Basic or fundamental research questions:*

   1.1 Do the four steps in experiential learning (as identified by Coleman) account for all that occurs in the learner? For all that is required of the learner? What is a more comprehensive definition of or framework for experiential learning?

   1.2 What is the relationship between experiential learning and experiential education?

   1.3 After a lengthy review of the literature on learning, Butler identified seven factors that influence "most kinds of learning, for most individuals, most of the time" (Butler 1977:5). He then associated each factor with an outcome or activity. Factors and outcomes are shown in the following chart (from Butler 1977:12):



Although we have grouped questions by research area, we fully recognize that the reader may believe a question is incorrectly placed. The use of research areas as organizers should suggest the potential for work in each area.

1.3.1 What is the relationship between the four experiential learning steps cited earlier (acting, particularizing, generalizing and applying) and these seven factors and conditions?

1.3.2 Does experiential learning account for student outcomes the same as, different from, or in addition to those Butler has identified?

1.4 Can different instructional processes produce the same results as those which produce experiential learning?

1.5 Is experiential learning only inductive learning?

1.6 Is a preferred learning environment or style related to age?

1.7 What part does potential utility play in experiential learning? Is it the content or the learning process that stimulates learning? Retention?

2. Problem-focused research questions:

2.1 Do young people have dominant learning styles (a la Wolfe and Byrne)? If so, how do these influence learning as it occurs through experiential education?

2.2 Does motivation automatically come with action, especially where action is repeated?

2.3 Does "newness" increase learning or do young people who have been in experiential education learning environments learn as well as those who have only recently joined?

2.4 How much opportunity for experiential learning is available in work places and the community? Does this vary according to type of community?

2.5 What can young people tell us about the working definition of experiential learning? Can they add to it? Modify it? Show us there are other ingredients to a learning situation that are critical to its success?

2.6 At some point does experiential learning cease to be learning? Does it become doing and not learning? If so, at what point does this occur?

2.7 How much structure must be provided in a non-school learning environment to insure that learning opportunity is available?

2.8 Is there a difference between experiential learning and trial-and-error learning? If so, what?

2.9 What can be added to the working definitions of both experiential learning and experiential education to make them more accurate and more useful?

2.10 How can young people be introduced to and prepared for experiential learning and experiential education?

3. Evaluative research questions:

3.1 "In what ways, under what circumstances and with what populations (is) experiential learning superior to traditional classroom learning?" (NWREL Education and Work 5-Year Plan:27)

3.2 What things are best learned through experiential learning? What things are not?

3.3 How can life skill development be measured?

3.4 When learning outcomes are the same or different for those in experiential education and those in regular classrooms, what accounts for this?

4. Policy research questions:

4.1 What are the policy implications of potential outcomes from the research questions listed above? For other research questions?

4.2 What effect will research efforts such as this have on current and future NIE-funded development? What effect should they have?

4.3 What kind of interface among programs and projects would such an effort require? Is this feasible? Desirable?

4.4 What are the implications for NIE of focusing on experiential learning and experiential education? How should career education be incorporated?

4.5 What data exist that would promote or inhibit experiential learning and experiential education programs?

4.6 What other federal, state and local policies support or contradict experiential learning and experiential education?

4.7 What research is currently underway both within and outside NIE in the experiential learning and experiential education areas? What kind of interface opportunities or problems could this represent?

4.8 Who should be involved in finalizing a research agenda? Who should be responsible for carrying it out? For monitoring it?

4.9 How might such a research effort influence the NIE Education and Work Plan in one year? In five years?

The above questions are posed to illustrate the kinds of research information it would be beneficial to have about experiential learning and experiential education. It is not our intent to limit research to those topics; nor do we propose to assess priorities within research areas. We do believe that an analysis of research topics, questions and priorities should be undertaken so that NIE is prepared to make informed decisions about the kinds of research topics that might best be addressed and in what kinds of development programs.

APPENDIX B: Applying the Process Model--How It Might Work With Gifted and Talented Junior High Youth

To test the usefulness of the process model described in Section VIII of this paper, we have applied the model in the following pages to NWREL's commitment to test experiential interventions with gifted and talented junior high youth. For the purposes of this test, School District X will serve as the agency with whom NWREL will collaborate. Although we cannot guarantee at this stage that all steps in the process model will be used (or, indeed, whether they will be necessary), we have included information for each step as a working model.

Phase I--Project Design

Guideline 1: Set the parameters for design.

Such an examination of EBCE and its components has already been made by members of both the NWREL EBCE evaluation team and the NWREL EBCE training and technical assistance team.

The former designed two instruments, "NWREL EBCE Implementation Site Essential Characteristics Checklist" and "NWREL EBCE Process Checklist," for use in evaluating pilot sites' fidelity to the NWREL EBCE operational model. They have proved useful in assisting pilot site personnel in examining whether divergences in their program's design and operating processes from the original model were purposeful or unintentional, and whether the results were acceptable to pilot site personnel.

In order to help school districts adapt EBCE to their particular needs, the training and technical assistance team has had to come to grips with the questions, "What makes EBCE EBCE?" and "How much can you change it without disappearing it?" Although their methodology was less formal than that of the evaluation team, the training and technical assistance team members have been operating within the design guidelines laid out in the two checklists as they have helped dozens of agencies fit EBCE into part-time schedules, work experience programs and career cluster programs or develop total model alternatives.

The efforts and experiences of these two NWREL teams should be brought together with the perspective of NIE personnel to formalize a framework for adaptation of EBCE to gifted and talented junior high youth. Following is a proposed process for accomplishing this step:

1. Members of the NWREL EBCE teams--training and technical assistance, evaluation, product development and administrative--will indicate on the two checklists which characteristics they consider to be essential to the existence of a program identifiable as EBCE for gifted and talented youth.

2. The results of this poll will be compiled to show a consensus NWREL EBCE definition of how much EBCE can be adapted and retain its identifying qualities.

3. These results will be submitted to NIE for approval and/or modification.

Guideline 2: Establish criteria for participants.

It is suggested that an agency testing with NWREL the application of EBCE to gifted and talented junior high youth should show evidence of the following:

1. Prior commitment to improving the educational process

2. Willingness to provide students with choices in their educational experience (e.g., options among classes, programs, activities, etc.)

3. Recognition that different educational strategies and environments are appropriate for different student needs

4. Presence of (or willingness to develop) a process for identifying gifted and talented junior high students

5. Availability of staff to design and operate the program

6. Commitment to developing and using the community as a learning resource

The extent to which School District X meets these criteria will be determined through conversations with district administrators and examination of pertinent district policies and other documents.

Guideline 3: Review existing non-EBCE experiential education programs.

As a starting point for the research and design effort, School District X personnel and NWREL EBCE developers and researchers in the gifted and talented junior high arena should not only have the knowledge of experiential programs that could serve as a resource pool of alternatives, but also of existing community-based and career education programs for gifted and talented youth. Further, the two groups will agree to document their knowledge (perhaps in the form of an annotated bibliography) and share the results with each other.

If more extensive information is desired, NWREL will assume responsibility for continuation of the search.

Guideline 4: Explore options with potential users.

Initiation of the implementation process by completion of this step would be accomplished as follows:

1. NWREL EBCE personnel will present sufficient information to School District X personnel to insure a thorough understanding of EBCE--its purposes, characteristics and processes.

2. The options for adapting or changing the model (Guideline 1) and the criteria for participation (Guideline 2) would be explained.

3. School District X personnel will identify EBCE components and activities they would find difficult or impossible to implement.

4. The results of this selection process would be recorded by NWREL EBCE staff and verified by School District X personnel.

It is important to note here that this step could extend over much of the remaining steps of Phase I, particularly if more than one school or team of people (see Guideline 7) is involved in the design process. Consensus decisionmaking can be somewhat slower than other methods, but it has the advantage of increasing participants' identification with and feelings of ownership of the results. This is particularly important in designing a "new" educational program which will depend on the commitment and extra efforts of its operating staff for successful implementation.

Guideline 5: Identify "extension" users.

The mutual selection process described here will depend on an understanding by both the potential user and the developer/researchers of the entire process model--design, implementation, research and evaluation, and dissemination/diffusion. To the extent possible, the specifics of how each phase and step is to proceed will be agreed on at this point. Documentation in the form of an agreement or contract stating NWREL and District X responsibilities will be negotiated, either at this time or in conjunction with establishing a design task force (see Guideline 6a below).

Guideline 6: Establish a design task force.

Establishment of a design task force representing all key segments within the user group--students, community resource persons, teachers, administrators, gifted and talented resource persons from within the district--is consistent with the community base emphasis of EBCE and will be relatively easy to accomplish

in School District X. A potential nucleus of such a group already exists in the form of a district career education advisory committee and a local association for gifted and talented students. Planning conferences already anticipated by District X for planning program design and student selection procedures will bring together project staff, school staff and students, and interested citizens. The administrator or program director for School District X's proposed gifted and talented program could assume responsibility for contacting, convening and chairing the group once potential members have been identified by whatever process District X program planners deem appropriate.

Guideline 6a: Develop design parameters, modifications, considerations and task timelines.

NWREL and School District X have somewhat different needs in planning this part of the work. Both intend to design, test, document and disseminate an innovative program for gifted and talented junior high youth. However, School District X's focus is on meeting the needs of its students and developing materials and procedures which it can use locally in this effort. NWREL's responsibility is somewhat broader in that its products must have applicability to the needs of several additional groups.

1. Gifted and talented junior high youth in other schools, districts and states
2. Gifted and talented youth in addition to those of junior high age
3. Learner populations with special characteristics and needs other than gifted and talented

Therefore, the development of an agreement between School District X and NWREL should distinguish between the goals and tasks which are--

1. Specific to the district's local needs
2. Specific to NWREL's broader needs
3. Needed mutually (or at least mutually useful)

This will allow for efficient cooperation and coordination on "mutual" tasks as well as intelligent and agreeable "horsetrading" of tasks needed by one or the other party exclusively.

The grid on the following page is offered as a beginning point for a discussion as to how the two groups might work together on the various pieces of work. It lists down the left side of the page the tasks called for in NWREL's 5-Year Plan. Across the top are listed those tasks called for in School District X's funding proposal. The boxes where items from both lists intersect have been marked with an "x".

Following the grid is a second visual representation, this one laid out into five quite general phases or areas of work contained in the plans of both groups. It is intended to be used as a draft worksheet to clarify the respective roles and responsibilities of NWREL and School District X in the five major types of work represented by the many tasks listed on the grid which precedes it.

Guideline 6b: Identify major questions to be addressed by design team.

The design task force, working with the developers and researchers, would pose and answer research and development-related questions pertinent to their EBCE adaptation. These questions should include but not be limited to the following:

- What's different about this user group that necessitates changing EBCE to respond to those differences?
- What are the real-world constraints that might create problems in implementation?
- What kind of information-sharing procedures will be needed to develop and sustain commitment throughout the process of implementation?

Guideline 7: Establish working teams.

For each school participating in the junior high gifted and talented research and development effort in School District X, the group of people associated with the program are considered by themselves and the district to be a team. The nucleus of each school's team consists of two or three classroom teachers. A project specialist, coordinator of career education and coordinator of gifted and talented education split their time among the three schools and may be considered members of each team. Similarly, the district's community resources clearinghouse will relate on a continuing basis to each school group and each school's principal will be involved in team activities in various ways.

As a result, the gifted and talented teams in School District X already overlap in several different ways, both setting the

Phase I: Planning (FY 78) ACTIVITIES CALLED FOR IN MAREL's 5-YEAR PLAN (G&T Section)	ACTIVITIES CALLED FOR IN SCHOOL DISTRICT X'S FUNDING PROPOSAL	Design an operational model for G&T junior high students	Operationalize program in three junior highs	a. select and train staff (includes designing training activities)	b. design student selection criteria and procedures (to identify students G&T in areas other than academic)	c. select and orient students	d. identify community sites and personnel	e. train community personnel	f. plan for and coordinate administrative and logistical procedures	Evaluate program effectiveness (includes designing evaluation plan and instruments and producing evaluation materials	Document program procedures and materials	Prepare handbook of program procedures and materials (end of first program year)	Prepare staff and student materials for pilot test (during second year)	a. program management	b. staff selection and training	c. student selection and orientation	d. instructional procedures and techniques	e. student materials	f. sample case histories	Disseminate program information to interested persons both within and outside school district	a. develop brochure describing project and disseminate to students, career education advisory committee, news media	b. prepare articles for publication in local news media	c. make presentations to local community groups	d. keep visual record of project processes and progress	e. produce slide/tape presentation
Review of existing programs (community based? experiential? career education?) for G&T junior high students																									
Selection of pilot school or district																									
Selection of working advisory committee																									
Development of evaluation design and materials										X															
Initial development of training and user materials, e.g.,																									
a. manual of procedures for identifying G&T students to participate in program					X																				
b. handbook for parents and teachers regarding broad concepts of career education and utilizing community experience											X	X	X	X	X	X	X	X	X				X	X	
c. materials for orientation of gifted students and their parents and teachers to importance of experiential learning and suggestions for utilizing community resources											X	X	X	X	X	X	X	X	X				X	X	
d. handbook for community personnel regarding characteristics of G&T students, career education concepts, and their role in program											X	X	X	X	X	X	X	X	X				X	X	
e. materials for students, parents and teachers related to role of community personnel											X	X	X	X	X	X	X	X	X				X	X	
f. community guide or resource book for students, parents and teachers detailing "types" of participating agencies and people willing to work with G&T students											X	X	X	X	X	X	X	X	X				X	X	
g. materials regarding processes for locating and using sites											X	X	X	X	X	X	X	X	X				X	X	
h. student materials related to interest explorations, projects, competencies and keeping a journal											X	X	X	X	X	X	X	X	X				X	X	
i. materials related to evaluation, documentation and program revision procedures										X															
Phase II: Pilot Test (FY 79)																									
Inservice for teachers			X																						
Identification of students				X																					
Orientation of students, parents and community personnel				X	X		X																		
Selection, scheduling and monitoring of community sites						X																			
Evaluation of program procedures and outcomes										X															

INSTITUTIONAL ROLES IN
GIFTED AND TALENTED JUNIOR HIGH PROGRAM

	NWREL	*School District X*
Program design and planning	Consult	Major responsibility; conduct activities
Staff training	Provide EBCE training as needed, emphasizing training School District X personnel to become future trainers for District X staff	Provide gifted and talented training Provide staff to be trained as EBCE trainers
Documentation and materials development	Consult regarding design, formatting, etc. as necessary Perform additional documentation and materials development needed by NWREL	Document program processes Develop instructional materials Produce necessary reports to district and funding agency
Dissemination a. School District X b. Statewide c. National	 Consult Consult Lead	 Perform all work Perform all work Consult
Evaluation	Consult	Perform all work

precedent for a complex team structure and simultaneously suggesting a cautious approach to further complexity. Emphasis should be placed on the Design Phase functions represented by the teams listed rather than on the formation of a separate team for each function. Whatever grouping of people will be most effective should be used to coordinate School District X staff with research and development personnel to accomplish the essential Design Phase functions:

- Development--to rework written material as necessary; to prepare new material; to design strategies to meet needs identified by the task force
- Community Liaison--to prepare information about the program for use with and by the community; to meet with community people about the program
- Training--to design orientation and training strategies for all involved user groups (i.e., students, parents, teachers, administrators, community persons)
- Documentation--to document the process and the products coming out of the design work for analysis purposes and for eventual use by other modifiers of EBCE
- Research--to make certain that opportunities for research on experiential learning and experiential education are built into the design; to introduce research needs as the project is being designed
- Evaluation--to prepare an evaluation design; to insure that significant evaluative research questions can be addressed as part of the design
- Implementation--to work with other teams during design, identifying potential implementation problems; to begin preparing for implementation based on the emerging design
- Dissemination--to develop or modify existing dissemination strategies in anticipation of later dissemination efforts; to share information about the design effort locally and regionally/nationally as appropriate

For example, the team structure which already exists in the district's junior high gifted and talented EBCE program could be retained as the basic group in each school for each of the above functions. To the basic group could be added student representatives; research, development and evaluation staff; community persons; and any specialists needed for a particular function. For each function, one person could be designated as leader. Depending on the function, there could be one leader in each school or one leader for the

district. The leader would be responsible for understanding the task well enough to effectively coordinate and focus the team's efforts.

NWREL and School District X should decide jointly what team formation could most effectively accomplish the dual purposes of carrying out a meaningful research and development effort and meeting the immediate needs of the district's gifted and talented junior high students.

Phase II--Implementation

Guideline 9: Expand the implementation team.

As in Guideline 7, this is translated to mean expand the duties and focus of the district's Design Phase teams to include implementation functions. School District X, in consultation with NWREL, should decide whether the team structure established in the Design Phase needs to be changed as emphasis shifts from design to implementation or whether the planners can simply become the doers.

Guideline 10: Hold open forums on research and evaluation.

The operations level personnel in School District X--namely the classroom teachers in each school who will be participating in the development of the junior high gifted and talented program--may be unfamiliar and inexperienced with the methodology and the important issues involved in educational research and evaluation. Their development efforts and level of comfort with their "creation" and its temporary kinks and rough edges will be enhanced by the perspective such discussions could provide.

The district's project specialist and/or coordinator of career education and/or coordinator of gifted and talented education could convene and conduct the forums, drawing on NWREL research and evaluation staff as resources. NWREL staff could be particularly helpful in suggesting discussion topics pertaining to phenomena, problems and questions common to most research and evaluation efforts.

This activity is particularly significant as a prelude to Guidelines 14 and 15 in the Research and Evaluation Phase, as users continue to play a significant role in shaping the development effort.

Guideline 11: Conduct periodic reviews and updates of the design.

This task is critical in any innovation and must be built into the task timelines of both the district and NWREL. It could most easily be accomplished by being written into the district's

evaluation design, to occur most logically at the end of the first (and each succeeding) semester of program operation.

Guideline 12: Maintain multiple roles.

Maintenance by each individual in District X's gifted and talented EBCE program of multiple roles is as necessary during the Implementation Phase as it is during the Design Phase (see Guideline 7). Teachers may be involved in developing public relations as well as curriculum materials; they may be collecting evaluation and research data during their daily activities of implementing the program with students. Students, in turn, can play a pivotal role in community liaison. They are naturals as disseminators of program information, both oral and written, and they could easily participate both in data collection (for either documentation or evaluation purposes) and materials development. The full range of roles will become known only as people try on different hats.

As in Guideline 7 of the Design Phase, team structure and individual responsibilities will be worked out by District X with advice from NWREL.

Phase III--Research and Evaluation

Guideline 13: Clarify users' research and evaluation responsibilities.

Identification of School District X's counterparts to NWREL researchers and evaluators will actually have begun during the Design Phase (Guideline 7) as people responsible for each function are identified. During Phase III activities, the usefulness of district staff as researchers and evaluators can be enhanced through explanation to them of the ways in which they can contribute:

1. Individuals can take responsibility for familiarizing themselves thoroughly with the project's research and evaluation purposes, design and techniques.

2. This will prepare them to recognize significant issues and questions as they arise--issues which can be brought before the larger group and cycled back into the program's design.

3. District staff can be assertive in identifying their own user needs for evaluation and research and in plugging these ideas into planning to guarantee they will be addressed.

4. Teachers can collect data needed to carry out the mutually designed plan.

5. Documentation of program processes and results can be shared by the many individuals having frequent contact with program operations.

Agreeing to as many specific responsibilities as possible will facilitate School District X staff becoming integral participants in the research and evaluation process rather than just observing or reacting to the process or participating only peripherally by administering instruments designed and/or called for by someone else.

Guideline 14: Establish a question and answer mechanism.

The need for communications links among the experienced and inexperienced researchers and evaluators could be met in a number of ways. For example, the open forums suggested in the Implementation Phase (Guideline 10) would also serve well for research and evaluation purposes. Questions raised but not answered during these forums could be recorded and addressed to NWREL personnel during their periodic site visits, by phone or by letter. Responses could in turn be disseminated to the group either through NWREL staff participation periodically in the forums or through a newsletter.

Guideline 15: Expand the problem-solving network.

This step is a natural corollary to Guideline 14. It simply focuses responsibility on the users for answers as well as questions in the question and answer mechanism. Whereas research and evaluation "experts" may appear to be the best, or even the only resolvers of problems, the School District X personnel are actually in a better position to generate answers truly useful to their local situation and possibly more creative and applicable on a broader scale than those of tradition-bound "experts."

So, problems arising as work progresses should be shared first among School District X people who are functioning as researchers and/or evaluators and then with all School District X people involved in the junior high gifted and talented EBCE program. The forums (Guideline 10) would serve as one mechanism for this exchange.

Phase IV--Dissemination/Diffusion

Guideline 16: Increase the responsibilities of the dissemination team.

As in Guideline 12 in the Implementation Phase and Guideline 13 during the Research and Evaluation Phase, this step will take

the form in School District X of people already involved in dissemination increasing their emphasis on that function. The project specialist can coordinate this function as it evolves from primarily information-sharing about program objectives and progress during the first two years to strategies facilitating adoption of the program by others in the third and fourth years. Throughout, teachers, students, community persons, the gifted and talented coordinator, career education coordinator, parents and all others can participate in dissemination activities (described in Guideline 17 below).

Guideline 17: Establish in-project as well as out-of-project dissemination vehicles.

District X already has plans for several dissemination activities:

1. During the first two years--

   - Inform community and professional personnel concerning program objectives and progress
   - Develop a brochure describing the project
   - Distribute brochure to all junior high schools and senior high schools serving ninth grade students in School District X
   - Distribute brochure to members of the local career education advisory committee and the association for gifted and talented
   - Prepare articles for publication in local news media
   - Initiate and sustain contact with local media through direct contact with media representatives
   - Make presentations to community groups such as Chambers of Commerce, Kiwanis, Rotary and other service clubs
   - Put together slide/tape presentation depicting development of the program
   - Share slide/tape with school and community groups as requested

2. During the third and fourth years--

   - Identify additional schools both within and outside the district to begin operation of gifted and talented career education programs for junior high youth

- Facilitate the use of local funds for personnel and materials associated with the program

In addition, District X personnel could collaborate with NWREL representatives to plan and implement other dissemination activities as desired:

- Articles could be prepared for publication in various newsletters already serving the district, region and/or state.

- Presentations could be made to the local career education advisory committee and association for gifted and talented at their regular meetings or conferences at regional, state and national levels.

- Links could be established between the local program and various existing EBCE groups--the state EBCE network, the national EBCE diffusion network, the informal league of other states with EBCE networks, and so on.

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